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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,054	08/29/2005	Deliang Zhang	3392-00013	3959
26753 7590 06/09/2008 ANDRUS, SCEALES, STARKE & SAWALL, LLP 100 EAST WISCONSIN AVENUE, SUITE 1100 MILWAUKEE, WI 53202				
EXAMINER				
ZHU, WEIPING				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
06/09/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/522,054

## Applicant(s)

ZHANG ET AL.

## Examiner

WEIPING ZHU

## Art Unit

1793

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 26-29, 31, 34-37 and 47-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-29, 31, 34-37 and 47-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 26-29, 31, 34-37 and 47-57 are currently under examination, wherein claims 26 and 34-37 have been amended and claims 47-57 have been newly added in applicant's amendment filed on April 9, 2008. The original claims 30, 32, 33 and 38-44 and the non-elected claims 45 and 46 have been cancelled by the applicant in the same amendment.

### ***Status of Previous Rejections***

2. The previous rejections of claims 26, 30-33 and 41 under 35 U.S.C. 102(b) as being anticipated by Nagle et al. (US 4,921,531) as stated in the Office action dated January 15, 2008 have been withdrawn in light of applicant's amendment filed on April 9, 2008. The previous rejections of claims 27-29 and 34-37 under 35 U.S.C. 103(a) as being unpatentable over Nagle et al. ('531) as stated in the Office action dated January 15, 2008 have been maintained. The new grounds of rejections have been established as follows.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 26, 31 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagle et al. ('531).

With respect to claims 26 and 47, Nagle et al. ('531) discloses a method of separating a ceramic component from a metal based composite comprising heating the metal-ceramic based composite, crushing the metal-ceramic based composite and separating the increased sized ceramic component from the other components to result in a metal rich fraction (col. 10, lines 3-17, col. 14, lines 54-61, col. 15, lines 5-14 and col. 15, line 66 to col. 16, lines 33). Nagle et al. ('531) does not disclose that the size of the component within the metal based composite is increased by the heating. However, the instant claim 26 does not limit the size of the component before the heating. The examiner's interpretation is that the size of the component before the heating could be any sizes smaller than the sizes of the component after the heating, including the size of zero. The heating of Nagle et al. ('531) initiates a component forming reaction involving in situ precipitation and growth of the component within the metal based composite (col. 10, lines 3-17). Therefore, the heating of Nagle et al. ('531) inherently leads to the increase of the size of the component.

With respect to claim 31, Nagle et al. ('531) discloses that the metal in the metal based composite comprises titanium (col. 9, lines 11-19).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 27-29, 34-37 and 48-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagle et al. ('531).

Claims 27-29 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagle et al. ('531) as stated in the Office action dated January 15, 2008.

With respect to the amended features of the claims 34-37, the reason for the rejections of these claims as stated in the Office action dated January 15, 2008 is further applied properly herein.

With respect to claims 48 and 49, the reason for the rejections of claim 38 as stated in the Office action dated January 15, 2008 is further applied properly herein.

With respect to claim 50, the reason for the rejections of claim 39 as stated in the Office action dated January 15, 2008 is further applied properly herein.

With respect to claim 51, Nagle et al. ('531) discloses that it is desired to decrease geometrical size of the composite by crushing or milling without limiting the crushing time or crushing and milling time as claimed (col. 15, lines 11-14). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the time of crushing or milling of Nagle et al. ('531) would be controlled not to reduce the size of the increase size of the component as claimed, because the increase size of the component is the desired size of the component as produced in the composite of Nagle et al. ('531) as disclosed by Nagle et al. ('531) (abstract).

With respect to claim 52, the reason for the rejections of claim 40 as stated in the Office action dated January 15, 2008 is further applied properly herein.

With respect to claim 53, the reason for the rejections of claim 41 as stated in the Office action dated January 15, 2008 is further applied properly herein.

With respect to claims 54 and 55, Nagle et al. ('531) does not specify the volume fraction of the metal component in the metal rich fraction as claimed. However, Nagle et al. ('531) discloses that the ceramic component is completely separated from the composite (col. 15, line 66 to col. 16, line 20), which obviously reads on the claimed feature, because after the complete separation of the ceramic component from the metal-ceramic based composite, the composite (i.e. the metal rich fraction as claimed) would inherently comprise mainly the metal component.

With respect to claim 56, the reason for the rejections of claim 44 as stated in the Office action dated January 15, 2008 is further applied properly herein.

With respect to claim 57, the reason for the rejections of claim 45 as stated in the Office action dated January 15, 2008 is further applied properly herein.

### ***Response to Arguments***

5. The applicant's arguments filed on April 9, 2008 have been fully considered but they are not persuasive.

The applicant argues that the ceramics of the instant invention are the unwanted component and the instant invention does not involve a solvent metal matrix and precipitation as Nagle et al. ('531). In response, see the new grounds of rejections in the paragraphs above. The examiner notes the teaching of Nagle et al. ('531) anticipates and renders all of the claim limitations of the instant invention obvious to one of ordinary

skill in the art. The objectives of Nagle et al. ('531) do not have to be the same as those of the instant invention. See MPEP 2144 [R-5].

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

WZ

6/2/2008